IN THE CLAIMS

Amended claims follow:

1.   (Currently Amended) A configurable lookup table system, comprising:
        a first controller coupled to a first lookup table, wherein the first controller
configures the first lookup table for a first type lookup; and
        a second controller coupled to a second lookup table, wherein:
            [[(a)]]in a first mode, the second controller configures the second lookup
        table for a second type lookup; and
            [[(b)]]in a second mode, the second controller configures the second lookup
        table for the first type lookup, and splits the first type lookup into a first level and
        a second level for using the second lookup table for the first level and using the
        first lookup table for the second level.

2.   (Original) The configurable lookup table system of claim 1, wherein:
        the first type lookup includes a Layer 2 lookup.

3.   (Original) The configurable lookup table system of claim 2, wherein:
        the Layer 2 lookup includes a Media Access Control (MAC) address lookup.

4.   (Original) The configurable lookup table system of claim 1, wherein:
        the second type lookup includes a Layer 3 lookup.

5.   (Original) The configurable lookup table system of claim 4, wherein:
        the Layer 3 lookup includes an Internet Protocol (IP) address lookup.

6.   (Currently Amended) The configurable lookup table system of claim 1, wherein:
        a lookup in the second mode includes:
            [[(a) a]]the first level in the second lookup table; and

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[[(b) a]]the second level in the first lookup table.

7.   (Currently Amended) The configurable lookup table system of claim 6, wherein:
the second level in the first lookup table is configured:
    [[(a)]]to be performed if a miss indication from the first level in the second
        lookup table; and
    [[(b)]]to not be performed if a hit indication from the first level in the second
        lookup table.

8.   (Original) The configurable lookup table system of claim 6, wherein:
the second lookup table includes a usable entry width of at least 72-bits.

9.   (Currently Amended) A method of controlling a lookup table system, comprising:
determining a first mode or a second mode; and
when in [[a]]the first mode:
    [[(a)]]using a first lookup table for a first type lookup; and
    [[(b)]]using a second lookup table for a second type lookup;
when in [[a]]the second mode:
    [[(a)]]splitting the first type lookup into a first level and a second level;
    [[(b)]]using the second lookup table for the first level; and
    [[(c)]]using the first lookup table for the second level.

10.   (Original) The method of controlling the lookup table system of claim 9, wherein:
the first type lookup includes a Layer 2 lookup.

11.   (Original) The method of controlling the lookup table system of claim 10,
wherein:
the Layer 2 lookup includes a Media Access Control (MAC) address lookup.

12.   (Original) The method of controlling the lookup table system of claim 9, wherein:

the second type lookup includes a Layer 3 lookup.

13.   (Original) The method of controlling the lookup table system of claim 12, wherein:

the Layer 3 lookup includes an Internet Protocol (IP) address lookup.

14.   (Original) The method of controlling the lookup table system of claim 9, wherein:

the second lookup table includes a usable entry width of at least 72-bits.

15.   (Original) The method of controlling the lookup table system of claim 9, wherein:

the splitting the first type lookup into the first level and the second level includes configuring for a parallel operation.

16.   (Original) The method of controlling the lookup table system of claim 9, wherein:

the splitting the first type lookup into the first level and the second level includes configuring for a serial operation.

17.   (Original) The method of controlling the lookup table system of claim 16, wherein:

the using the first lookup table for the second level is dependent on a miss indication from the using the second lookup table for the first level.

18.   (Currently Amended) A means for controlling a lookup table, comprising:
a means for determining a first mode or a second mode; and
when in [[a]]the first mode:

[[(a)]]a means for using a first lookup table for a first type lookup; and

[[(b)]]a means for using a second lookup table for a second type lookup;
when in [[a]]the second mode:

[[(a)]]a means for splitting the first type lookup into a first level and a second level;

[[(b)]]a means for using the second lookup table for the first level; and

[[(c)]]a means for using the first lookup table for the second level.

19.   (Original) The means for controlling the lookup table of claim 18, wherein:
       the means for splitting the first type lookup into the first level and the second level includes means for configuring for a parallel operation.

20.   (Original) The means for controlling the lookup table of claim 18, wherein:
       the means for splitting the first type lookup into the first level and the second level includes means for configuring for a serial operation.

21.   (New) The configurable lookup table system of claim 1, wherein, in the second mode, a hash table is used for a split lookup.

22.   (New) The configurable lookup table system of claim 21, wherein the second level is indexed by the hash table.